DENSO
BHT-600 Series Specification

	Barcode Model		2D Code Model	
	Wireless LAN Model	Batch model	Wireless LAN Mode	Batch model
Format	BHT-604BW	BHT-604B	BHT-604QW	BHT-604Q
OS	BHT-OS			
CPU	32 Bit RISC CPU			
Memory (Flash memory)[1]	16MB(User file area approx. 10MB)		16MB(User file area approx. 8.7MB)	
Display — Size[2]	QVGA (240x320 dots)			
Display Device	Liquid crystal dot matrix display (color)			
Character Display[3] — 16 dot font	15 characters x 20 lines (full-width), 30 characters x 20 lines (half-width)			
24 dot font	10 characters x 13 lines (full-width), 20 characters x 13 lines (half-width)			
Backlight	White LED			
Scanner Method	Laser		Area Sensor	
Scan Codes — 2D Code	—		QR Code, Micro QR Code, SQRC, PDF417, Micro PDF417, Maxi Code, DataMatrix (ECC 200), EAN. UCC Composite (GS1 DataBar Composite)	
Barcodes	EAN-13/-8(JAN-13/-8), UPC-A/-E, UPC/EAN(With add-on), Interleaved 2 of 5, CODABAR(NW-7), CODE39, CODE93, CODE128, GS1-128(EAN-128), Standard 2 of 5, RSS(GS1 DataBar)		EAN-13/-8(JAN-13/-8), UPC-A/-E, UPC/EAN(With add-on), Interleaved 2 of 5, CODABAR(NW-7), CODE39, CODE93, CODE128, GS1-128(EAN-128), RSS(GS1 DataBar)	
Minimum Resolution — 2D Code			0.25mm	
Barcodes	0.127mm		0.15mm	
Scanning reference position	—		105mm	
Marker			Area guide marker	
Scan Confirmation	3 Color LED (Red/Blue/Green), beep, vibration			
Keypad — No. of Keys	28 keys (including power key) + 2 trigger keys + cursor key			
Communications — Optical I/F — Communication System	Infrared (IrDA Ver. 1.3 [Lower Power] physical layer compliant)			
Communication Speed	~115.2kbps, 460.8kbps, 4Mbps[4]			
Transmission Distance	Approx. 0.15m max.			
Wireless I/F — Compatible Standards	IEEE802.11b/g	—	IEEE802.1b/g	—
Transmission Distance[5]	Indoors: Approx. 75m, Outdoors: Approx. 200m	—	Indoors: Approx. 75m, Outdoors: Approx. 200m	—
Access System	Infrastructure mode, ad-hoc mode	—	Infrastructure mode, ad-hoc mode	—
Security	WEP40, 128, WPA-PSK(TKIP), WPA2-PSK(AES), WPA-1x(TKIP/EAP-TLS,PEAP), WPA2-1x(AES/EAP-TLS,PEAP), 802.1x(EAP-TLS,PEAP)	—	WEP40, 128, WPA-PSK(TKIP), WPA2-PSK(AES), WPA-1x(TKIP/EAP-TLS,PEAP), WPA2-1x(AES/EAP-TLS,PEAP), 802.1x(EAP-TLS,PEAP)	—
Cable I/F	RS-232C(115.2kbps MAX.)			
Power Supply — Main Battery	Lithium-ion battery			
Hours of operation[6]	approx. 40 hours[7]		approx. 27 hours[7]	
	approx. 24 hours[8]	approx. 40 hours[9]	approx. 16 hours[8]	approx. 27 hours[9]
Auxiliary Functions	Clock, beeper, vibration, low-battery indication, remote wake-up function			
Environmental Requirements — Operating Temperature	−5~50℃[10]			
Protection Rating	IP54			
Drop Resistance[11]	More than 1,000 times from 0.2m height/10 times on each 6 sides (total 60 times) from 1.2m height above concrete floor			
Weight (incl. battery)	Approx. 265g		Approx. 275g	

※1: User file area includes font file area (approx. 400kb). ※2: The LCD panel is manufactured using high-precision technologies. While the effective pixel count is more than 99.99%, please be aware that there may be up to 0.01% of dead or stuck-on pixels. ※3: The standard font, small font, 30 dot font, and 40 font may be set aside from the 16 bit font and 24 bit font. ※4: When using the communication unit for the BHT-600 series, the maximum value of the RS-232C is 115.2kbps, USB type 460.8kpbs, and Ethernet type 4Mbps. ※5: Transmission distances are theoretical values and may vary according to actual usage environment conditions. ※6: The hours of operation are a reference value for operation at room temperature and may vary according to actual usage environment conditions. ※7: In the case of 1 scan per 5 seconds, at backlight level 1. ※8: In the case of a scan: Wireless communication: Screen rewriting: Standby=1:1:1:20, at backlight level 1. Wireless ON only during communication and OFF at other times. ※9: In the case of 2 scans every 10 seconds, at backlight level 1. ※10: 0~40℃ when recharging. ※11: Test value at room temperature, not guaranteed.

Scan Distance and Angle

BHT-600B
30
40
200
450
500mm
Valid Scan Range※
0.127
0.15
0.33
0.50
1.0
1.2mm
Scan Distance 0 100 200 300 400 500 600mm

BHT-600Q
Scanning distance reference(105mm)
142×106
140×104
112×83
102×75
74×55 67×50
57×42
22×18 29×21
110°
0.15
0.25
0.50 QR code resolution
0.33
Barcode resolution
150 170 200 250
Unit : mm

※Laser beam amplitude is approximately 90% of the decode range (including margin). 40, 200, 450, 500 are the valid scan range from each distance.

Dimensions
Unit: mm (All are reference sizes.)

BHT-600B 46 / BHT-600Q 48
63
209
50 48
27 27

Accessories
● Hand strap
● Lithium-ion battery (BT-20LB)
● Operation guide
● User manual HP↓

Software
Development Tool
● Development Tool
・ BHT-BASIC4.0 Transfer Utility
・ BHT-BASIC4.0 Transfer Utility DLL Pack
・ BHT-BASIC4.0 Program Converter HP↓

● BHT Software
・ BHT Term Emulator (Software to use BHT such as AS/400 as a terminal of the host computer)
・ BHT Browser (HTML browser)

● Setting Software
・ BHT Setting HP↓

HP↓ Software with this mark can be downloaded from the company's website (Qbdirect) free of charge.

Accessories (sold separately)
● Communication Units
・ CU-601 (RS-232C + battery charger for main unit)
・ CU-611 (Ethernet + battery charger for main unit)
・ CU-621 (USB + battery charger for main unit)
● Battery Charger
・ CH-201A (Separate charger for lithium-ion battery)
・ CH-651 (Main unit charger)
・ CH-704 (Multi (4) battery charger)
● Battery
・ BT-20LB (Lithium-ion battery)
● Case, etc.
・ SCBHT-600B (soft case for BHT-600B)
・ SCBHT-600Q (soft case for BHT-600Q)
・ WHBHT-7000/7500 (waist case)
・ NSBHT-500 (neck strap)

Please refer to the website for products and details.
http://www.denso-wave.com/en/adcd/

● For the purposes of product improvement, the design and specifications may change without prior notice.
● Information in this catalog is valid as of August 2011.

Denso Wave Co., Ltd

HANDY TERMINAL
BHT-600
SERIES

Barcode Model
BHT-604B / BHT-604BW

2D Code Model
BHT-604Q / BHT-604QW

Tough body and scanning performance for the toughest fields.

Easily scans "wide barcodes" for logistics ITF, etc.

Large 2.8 inch screen for great visibility

ASP Microcomputers
456 North Road, ORMOND VIC 3204
Ph: (03) 9578 7600 Fax: (03) 9578 7727
Email: solutions@asp.com.au www.asp.com.au
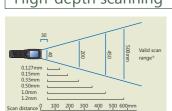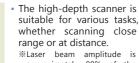
Scanning Performance

Barcode model scanning from near to far, and the 2-dimensional barcode model offering various scan modes.

We promise the level of high speed and precision scanning that only the Denso Wave can deliver.

Applicable Model

Barcode Model

High-depth scanning


```
30
200
450
500mm
0.127mm
0.15mm
0.33mm
0.50mm
1.0mm
1.2mm
Scan distance  0  100  200  300  400  500  600mm
Valid scan range*
```

- The high-depth scanner is suitable for various tasks, whether scanning close range or at a distance.
  ※Laser beam amplitude is approximately 90% of the decode range (including margin). 40, 200, 450, 500 are the valid scan range from each distance.

Scan angle

50°

- The scan angle is set to 50° which makes it easy to scan from the top of a shelf to the bottom while checking the screen
- Also offers ease of operation on the top of a desk

Applicable Model

2D Code Model

Wide range of scan functions available

A wide range of scan functions are available from point scan mode to linked QR code batch scanning mode, and multi-row barcode scanning mode.

Point scan mode	Linked QR batch scan mode	Multi-row barcode scanning mode
Scans with pin points even if the scan area includes complicated codes.	Scans linked QR codes in batch.	Scans multi-row barcodes.

Applicable Model

2D Code Model

Able to scan deteriorated codes.※

- Easily reads rubbed, peeled, or poorly printed codes.

Partially missing 2-dimensional code

※May not be able to read codes depending on degradation state.

Applicable Model

Barcode Model

2D Code Model
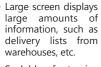
Reads wide barcodes.

EIAJ

Logistics ITF

- Also supports "wide barcodes" including CODE39, logistics ITF EIAJ labels.

Screen Display

Large 2.8 inch screen. Information is easily readable, and the screen is flexibly replaceable due to high screen compatibility with other models.

Beautiful large 2.8 inch screen display

320 dot
240 dot

Alter the background color for improved readability of lists

Assign different background colors to each task

24-dot, 10 characters x 13 lines display

- Large screen displays large amounts of information, such as delivery lists from warehouses, etc.
- Scalable font size expands freedom in screen design.
- Grayscale display allows for beautiful letter display.

QVGA color LCD

- Intuitive screen design with icons indicating task menus.
- Corporate logos or product images can also be displayed.
- Screen design can be shared with the BHT-500/800 series with compatible QVGA.

Screen compatibility with existing models

BHT-600
BHT-100   BHT-7500
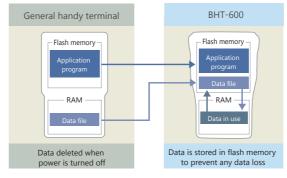
- Screen compatibility function allows for smooth display of existing model (BHT-7500/100 series) screens, reducing the need for replacement

The BHT-600 series is strong at all locations.

Picking in the backyard (warehouse).

The large 2.8 inch screen allows for easy visibility when browsing through information on the screen and reducing the strain on the eyes after sustained periods of operation.

Logistics inspection.

12mm wide key intervals allow for easy operation even when wearing gloves. Also, the backlit keyboard reduces mistakes even in dark environments.

Production line process control

The robust main unit offers ease of mind even when dropped on the ground or upon receiving a knock. The flash file system takes away the risk of losing data when the power runs out.

Inventory management

The large screen display offers a wide variety of information, ensuring overall efficiency, with data on ordering stores, inventory inquiry, and changes in sales prices.

Durability and Environmental Resistance

Secure data storage

Flash file system

General handy terminal

Flash memory
- Application program
RAM
- Data file

Data deleted when power is turned off

BHT-600

Flash memory
- Application program
- Data file
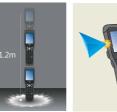RAM
- Data in use

Data is stored in flash memory to prevent any data loss

- Inputted data is saved in the terminal's flash memory, preventing data loss even when the battery runs out of power.
  There is no need to worry about data loss, even when the battery is low.

Strong durability against drops and knocs, as well as protection against environmental conditions for extended use.

1.2m

- High drop resistance for everyday use by applying leading technology to the terminal.
- Thick LCD protective plate strengthens impact resistance by more than doubling the strength of previous models.
- Achieves an IEC International standards protection rating of IP4 with high quality technology.

Function

Magic Key

M1 M2
7 8 9

- Convenient cursor key for selecting menus or switching screens.

- Using the software functions can be freely assigned to four magic keys
- Intuitive red/green colors make operation easy
- Minimizes finger movement for more convenience

(Ex) 'Green' is confirm, 'Red' is cancel. Cursor key to select task, and 'Green' to confirm.

Function Key

ENT

- Eight function keys to assign task selections/functions
- Easily see in the dark with a backlit keypad

High Volume Beeper/Vibration

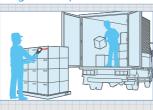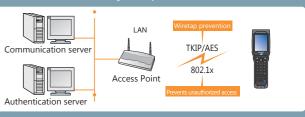- Vibration and sound alerts notifying end of task or error.

Communication

Supports IEEE802.11b/g※1

- Supports IEEE802.11b/g allowing simultaneous access by multiple BHT without reduced response speed

Communication server   Access Point
LAN   IEEE802.11b/g

※1: Limited to BHT-604BW/QW

Wireless LAN security※1

- In addition to existing WEP keys, 'WPA WPA2' technology is also made available for improved security, preventing unauthorized access and wiretapping
- Long operation hours with 24 hour wireless access (Scan: Wireless communication; Screen rewriting: Standby=1:1:1:20)

Communication server
Authentication server
Access Point
LAN
Wiretap prevention
TKIP/AES
802.1x
Prevents unauthorized access

※2:24 hour operation limited to BHT-604BW

Software

■Easy introduction

BHT Setting which makes set up easy.※1

- These terminals come with a simple setup and installation method for applications and customizations.

● BHT Setting order

Pattern 1
Setup through wireless LAN
(Limited to BHT-604BW/QW)

BHT Setting
Communication server
① Input various settings with BHT Setting

Pattern 2
Setup through serial communication

BHT Setting
Communication Access point server
② Establish wireless setup environment※2
Collectively transmit setup file and program file to each BHT via wireless LAN
LAN

BHT Setting
Communication server
Communication unit (CU-601, CU621)
② Prepare communication unit
Transmit setting file and program file to each BHT via communication unit
Serial

※1 Downloadable at the company website QBdirect) free of charge.
※2 Requires access point with DHCP server functions available.
   MOTOROLA APS131: Available
   CISCO Systems AIR-AP1131AG: Not available

BHT introduction order up to now (Wireless)

① Download program/data file to BHT

② Set up BHT main unit settings (time, scan, etc.)

③ Consider the BHT with settings fro ①② applied as the master unit and create a BHT copy (IrDA communication)

④ Set up each BHT settings (IP, etc.)